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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER

KIM, R

ART UNIT

PAPER NUMBER

2317

DATE MAILED: 04/01/97

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

08/660,461

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		KIM, R	
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			2317
			ART UNIT U3 / PAPER NUMBER

7

DATE MAILED:

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

Responsive to communication(s) filed on 3/20/97

This action is FINAL.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire _____ month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

Claim(s) 3-9, 11-13, 16, 19, 22-24, 26-27 and 30-33 is/are pending in the application.
Of the above, claim(s) _____ is/are withdrawn from consideration.

Claim(s) _____ is/are allowed.

Claim(s) 3-9, 11-13, 16, 19, 22-24, 26-27 and 30-33 is/are rejected.

Claim(s) _____ is/are objected to.

Claim(s) _____ are subject to restriction or election requirement.

Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on _____ is/are objected to by the Examiner.

The proposed drawing correction, filed on _____ is approved disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) _____

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

Notice of Reference Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

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DETAILED ACTION

1. This Office Action is responsive to the Supplemental Amendment filed on March 20, 1997 for application 08/660,461 which is a divisional application of serial number 08/131,523 filed October 1, 1993. As directed by the amendment, claims 2, 10, 14-15, 17-18, 20-21, 25 and 28 are canceled, and claims 30-33 are added. Thus, claims 3-9, 11-13, 16, 19, 22-24, 26-27 and 6 30-33 are currently pending in the application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - 11 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
- 16 3. Claims 3-9, 11-13, 16, 22-24, 26-27 and 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tompkins et al., US Patent 5,014,267 (**Tompkins**) in view of Kannes, US Patent 4,965,819 (**Kannes**) and Watabe et al, "Distributed Desktop Conferencing System with Multiuser Multimedia Interface", IEEE Journal on Selected Areas in Communications, Vol. 9, No. 4, May 1991, pages 531-539 (**MERMAID**).
- 21 4. As to claim 9, 24, 30 and 33, **Tompkins** teaches a system for teleconferencing (See title and abstract) between a first location and a second location (See Figure 10 and Col. 22, lines 41-60), the system comprising: a plurality of workstations at the first location (Fig. 10, #223

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1 "Mates") and at least one workstation (Fig. 10, #230) at the second location, each workstations
being associated with a participant and having a monitor and participant audio and video capture
and reproduction capabilities (See Figure 1 and Fig. 2, #10, "Mate", and Col. 5, lines 34-50 and
Col. 7, lines 59-65), an AV path (Fig. 3 and Col. 9 line 64- Col. 10, line 16), a first (audio)
mosaic generator at the first location for combining signals of at least two first location
6 participants (Figure 10, #221, Figures 4a and 4b, Col. 11, lines 25-55 and Col. 12, lines 40-65),
for receiving a second location participant image from second location and combining at least a
portion of the first combined signal with received signal from the second location, and for
reproducing the combined signal at first location (See Fig. 7, Col. 19, line 58 - Col. 20, line 23),
and an equivalent mosaic generator at the second location (Fig. 10, #228); and an audio summer
11 configured to combine only the second and third participant for reproduction at the first
participant (Col. 19, lines 57-68).

Tompkins, while teaching the "mosaicing" of audio signals, does not teach combining of
video signals into a mosaic images, but teaches a system in which single video image of a single
participant is selectively displayed (Col. 19, lines 34-57).

16 **Kannes** teaches a teleconferencing system comprising: a station associated with each
participant, and having a monitor and AV capture and reproduction capabilities (Figs 1, 3, and
Col. 4, lines 28-41), an AV path for carrying AV signal between the participants (Fig. 2, #30, 40
an 51, and Col. 4, lines 18-28), a video mosaic generator to combine a portion of the mosaic

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1 signal with a captured image of a third participant (Fig. 5, #118, #119 and #120, and Col. 9, line
47 - Col. 10, line 55).

MERMAID further teaches no-overlapping, multi-window display of a plurality of participants in a teleconferencing system based on digitized NTSC format signal which can be used in Tompkins system (Page 534, Paragraph B, and Figure 8).

6 5. As to claim 3, 5, 7, 12, 22 and 27, **MERMAID** further teaches that a participant to be displayed can be selected from a single participant (close up), or multi-participant where which participant can be decided (See Page 535, paragraph A.4 "Video Window"). It should also be noted that the fact that a participant or a group of participant can be chosen for display suggest the ability to choose less number of participant for display than actual number of participant.

11 6. As to claims 8, **MERMAID** further teaches a CODEC at each workstation for compressing video signals (Page 534, Paragraph B, It should be noted that the mosaicing of the images in **MERMAID** system happens after each station transmitting a compressed signal. Thus, it is logical to assume that the combining of images is done on compressed signals).

7. As to claims 11 and 26, it is an inherent teachings of **MERMAID** that the system includes synchronization means for producing the mosaic signals to synchronize the horizontal and vertical SYNC signals of the mosaiced signal of Figure 8.

8. As to claims 4, 6, 13 and 23, **Kannes** further teaches a plurality of mosaic generator at one location (Col. 10, lines 44-55) and automatic selection of the participant to be displayed (See "Voice sensitive switching", Col. 5, line 66 - Col. 6, line 32).

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1 9. As to claim 16, **Tompkins** further teaches the echo cancellation by reducing the feedback between the speakers and the microphone (Figures 13, 15a and 15b, and Col. 26, line 39 - Col.27, line 68)

10. As to claim 31, **MERMAID** further teaches a data conference manager (Page 532, Figure 4 and Paragraph 2)c) "Application Knowledge Base") for managing a data conference during 6 which the shared data is displayed on the workstation monitors of at least two participants (Page 535, Fig. 6 and paragraph IV.A.2) "Shared Window", and Page 537, Figure 9 and paragraph VI. 1) "Collaborative Software Development" and 2)Cooperative Document Editing").

11. As to claim 32, **Tompkins** further teaches the AV switch for switching AV signal between the mosaic generator, the location and the workstations (Fig. 4a, # 70 and #72, and Col. 11, lines 43-55).

12. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of **Tompkins**, **Kannes** and **MERMAID** to incorporate the video mosaic generator feature as taught by **Kannes** and **MERMAID** into the system of **Tompkins**, as the references are directed to an analogous art of teleconferencing, and to provide the 16 advantageous improvement of displaying many of the participants simultaneously at one workstation (See **Kannes**, Col. 2, lines 3-16), whereas **Tompkins** provides the necessary architecture for incorporation of the teachings of **Kannes** and **MERMAID** (See above explanation regarding audio mosaic generation of **Tompkins** system).

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1 13. Claims 19 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over
Tompkins et al. in view of Kannes as applied to claims 30 and 9 above, and further in view of
Moore at al., US Patent 5,561,736 (Moore).

Tompkins in view of Kannes teaches the invention substantially as claimed as explained
in paragraphs 4-5 of this Office Action.

6 Tompkins and Kannes, in combination, does not teach the audio control based on the
position of the images of the participants.

Moore teaches a system for a voice synthesis in which the voice is reproduced based on
the position of the speaker in the display monitor (See Abstract, Figures 1, 6A and 6B, Col. 5,
lines 30-45 and Col. 7, line 64 - Col. 8, line 10).

11 It would have been obvious to one of ordinary skill in the art at the time the invention was
made to combine the voice reproduction control with spatial consideration feature as taught by
Moore with the teleconferencing system taught by Tompkins and Kannes in order to fully
utilize the multimedia capable computers available in the market and to provide more life like
sound system (See Moore, Col. 2, lines 6-15).

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Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent:	Issued:	Inventor:	Filed:
5,602,580	Feb 1997	Tseng	Sep 1993
6 5,515,491	May 1996	Bates et al.	Dec 1992
5,382,972	Jan 1995	Kannes	Sep 1992
4,716,585	Dec 1987	Tompkins et al.	Apr 1985
4,686,698	Aug 1987	Tompkins et al.	Apr 1985
4,054,908	Oct 1977	Poirier et al.	May 1976
11 5,526,024	Jun 1996	Gaglianello et al.	Aug 1994
5,444,476	Aug 1995	Conway	Dec 1992
5,353,398	Oct 1994	Kitahara et al.	Mar 1993

Non-Patent Publications

16 Nunokawa et al., "Teleconference using stereo voice and an electronic OHP", IEEE, Dec 1988.

Watabe et al., "A Distributed Multiparty Desktop Conferencing System and Its Architecture", IEEE, 1990.

21 Maeno et al., "Distributed Desktop Conferencing System (MERMAID) Based on Group Communication Architecture, IEEE, 1991.

26 Ohmori et al., "Distributed Cooperative Control for Sharing Applications Based on Multiparty and Multimedia Desktop Conferencing System", IEEE, 1992.

Sakata, "B-ISDN Multimedia Workstation Architecture", IEEE, 1993.

Kamel, "An Integrated Approach to Shared Synchronous Groupware Workspaces", IEEE 1993.

31 Leung et al., "Optimum Connection Paths for a Class of Videoconferences", IEEE 1991.

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1 15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ki Kim whose telephone number is (703) 305-3872, and whose E-mail Address is ki.kim@uspto.gov. The examiner can be normally be reached Monday through Friday from 7:00 AM to 4:00 PM EST.

6 If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Thomas C. Lee, can be reached at (703) 305-9717. The fax number for this Group is (703) 308-5359.

11 Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

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21

Ki Kim
March 27, 1997

CHRISTOPHER B. SHIN
PRIMARY EXAMINER
GROUP 2300

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